

WATER FEATURES
Pembina County, North Dakota

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Ar: Arveson-----	B/D	April	0.0-2.0	>6.0	---	---	---	---	None
		May	0.0-2.0	>6.0	---	---	---	---	None
		June	0.0-2.0	>6.0	---	---	---	---	None
		July	0.0-2.0	>6.0	---	---	---	---	None
Av: Arveson-----	B/D	April	0.0-2.0	>6.0	---	---	---	---	None
		May	0.0-2.0	>6.0	---	---	---	---	None
		June	0.0-2.0	>6.0	---	---	---	---	None
		July	0.0-2.0	>6.0	---	---	---	---	None
Aw: Arveson-----	B/D	January	0.0	>6.0	0.0-1.0	---	---	---	None
		February	0.0	>6.0	0.0-1.0	---	---	---	None
		March	0.0	>6.0	0.0-1.0	---	---	---	None
		April	0.0	>6.0	0.0-1.0	---	---	---	None
		May	0.0	>6.0	0.0-1.0	---	---	---	None
		June	0.0	>6.0	0.0-1.0	---	---	---	None
		July	0.0	>6.0	0.0-1.0	---	---	---	None
		August	0.0	>6.0	0.0-1.0	---	---	---	None
		September	0.0	>6.0	0.0-1.0	---	---	---	None
		October	0.0	>6.0	0.0-1.0	---	---	---	None
		November	0.0	>6.0	0.0-1.0	---	---	---	None
		December	0.0	>6.0	0.0-1.0	---	---	---	None
BaD: Barnes-----	B		---	---	---	---	---	---	---
BnA: Bearden-----	C	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
BnB: Bearden-----	C	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
BrA: Bearden, SALINE-----	B	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
Bs: Bearden-----	C	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
Colvin-----	C/D	March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
BvA: Bearden-----	C	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
Glyndon-----	C	April	2.5-6.0	>6.0	---	---	---	---	None
		May	2.5-6.0	>6.0	---	---	---	---	None
		June	2.5-6.0	>6.0	---	---	---	---	None
		July	2.5-6.0	>6.0	---	---	---	---	None
BwA: Binford-----	B		---	---	---	---	---	---	---
BwB: Binford-----	B		---	---	---	---	---	---	---

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Bx: Borup-----	B/D		---	---	---	---	---	---	---
		April	0.0-2.5	>6.0	---	---	---	---	None
		May	0.0-2.5	>6.0	---	---	---	---	None
		June	0.0-2.5	>6.0	---	---	---	---	None
		July	0.0-2.5	>6.0	---	---	---	---	None
ByA: Brantford-----	B		---	---	---	---	---	---	---
ByB: Brantford-----	B		---	---	---	---	---	---	---
ByC: Brantford-----	B		---	---	---	---	---	---	---
ByD: Brantford-----	B		---	---	---	---	---	---	---
Ca: Cashel-----	D		---	---	---	---	---	---	---
		March	---	---	---	---	---	Brief	Frequent
		April	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		May	1.0-3.0	>6.0	---	---	---	Brief	Frequent
		June	1.0-3.0	>6.0	---	---	---	---	None
		July	1.0-3.0	>6.0	---	---	---	---	None
CaA: Cashel-----	D		---	---	---	---	---	---	---
		March	---	---	---	---	---	Brief	Occasional
		April	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.0-3.0	>6.0	---	---	---	---	None
		July	1.0-3.0	>6.0	---	---	---	---	None
CaB: Cashel-----	D		---	---	---	---	---	---	---
		March	---	---	---	---	---	Brief	Occasional
		April	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		May	1.0-3.0	>6.0	---	---	---	Brief	Occasional
		June	1.0-3.0	>6.0	---	---	---	---	None
		July	1.0-3.0	>6.0	---	---	---	---	None
CbB: Claire-----	A		---	---	---	---	---	---	---
Cd: Clayey Breaks-----	C		---	---	---	---	---	---	---
Cf: Colvin-----	C/D		---	---	---	---	---	---	---
		January	0.0	>6.0	0.0-1.0	---	---	---	None
		February	0.0	>6.0	0.0-1.0	---	---	---	None
		March	0.0	>6.0	0.0-1.0	---	---	---	None
		April	0.0	>6.0	0.0-1.0	---	---	---	None
		May	0.0	>6.0	0.0-1.0	---	---	---	None
		June	0.0	>6.0	0.0-1.0	---	---	---	None
		July	0.0	>6.0	0.0-1.0	---	---	---	None
		November	0.0	>6.0	0.0-1.0	---	---	---	None
		December	0.0	>6.0	0.0-1.0	---	---	---	None
Cg: Colvin, SALINE-----	D		---	---	---	---	---	---	---
		March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
Ch:			---	---	---	---	---	---	---

WATER FEATURES--Continued
Pembina County, North Dakota

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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Colvin-----	C/D	March	0.0-1.5	>6.0	---	---	---	---	None
		April	0.0-1.5	>6.0	---	---	---	---	None
		May	0.0-1.5	>6.0	---	---	---	---	None
		June	0.0-1.5	>6.0	---	---	---	---	None
		July	0.0-1.5	>6.0	---	---	---	---	None
CoA: Cormant-----	B/D	April	0.0-2.0	>6.0	---	---	---	---	None
		May	0.0-2.0	>6.0	---	---	---	---	None
		June	0.0-2.0	>6.0	---	---	---	---	None
		July	0.0-2.0	>6.0	---	---	---	---	None
DdA: Divide-----	C	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
Do: Dovray-----	D	January	0.0	>6.0	0.0-2.0	---	---	---	None
		February	0.0	>6.0	0.0-2.0	---	---	---	None
		March	0.0	>6.0	0.0-2.0	---	---	---	None
		April	0.0	>6.0	0.0-2.0	---	---	---	None
		May	0.0	>6.0	0.0-2.0	---	---	---	None
		June	0.0	>6.0	0.0-2.0	---	---	---	None
		July	0.0	>6.0	0.0-2.0	---	---	---	None
		August	0.0	>6.0	0.0-2.0	---	---	---	None
		September	0.0	>6.0	0.0-2.0	---	---	---	None
		October	0.0	>6.0	0.0-2.0	---	---	---	None
		November	0.0	>6.0	0.0-2.0	---	---	---	None
		December	0.0	>6.0	0.0-2.0	---	---	---	None
EgA: Egeland-----	B								
EgB: Egeland-----	B								
EmA: Embden-----	B	April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
EmB: Embden-----	B	April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
FaA: Fairdale-----	B	March	---	---	---	---	---	Brief	Occasional
		April	3.0-5.0	>6.0	---	---	---	Brief	Occasional
		May	3.0-5.0	>6.0	---	---	---	Brief	Occasional
		June	3.0-5.0	>6.0	---	---	---	Brief	Occasional
FaB: Fairdale-----	B	March	---	---	---	---	---	Brief	Occasional
		April	3.0-5.0	>6.0	---	---	---	Brief	Occasional
		May	3.0-5.0	>6.0	---	---	---	Brief	Occasional
		June	3.0-5.0	>6.0	---	---	---	Brief	Occasional
Ff: Fargo-----	D	March	0.0	>6.0	0.0-0.5	---	---	---	None
		April	0.0	>6.0	0.0-0.5	---	---	---	None
		May	0.0	>6.0	0.0-0.5	---	---	---	None
		June	0.0	>6.0	0.0-0.5	---	---	---	None
		July	0.0	>6.0	0.0-0.5	---	---	---	None
GaA:									

WATER FEATURES--Continued
Pembina County, North Dakota

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Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency	
			Ft	Ft	Ft					
Gardena-----	B	April	3.0-5.0	>6.0	---	---	---	---	None	
		May	3.0-5.0	>6.0	---	---	---	---	None	
		June	3.0-5.0	>6.0	---	---	---	---	None	
GbA: Gilby-----	C	April	1.0-4.0	>6.0	---	---	---	---	None	
May		1.0-4.0	>6.0	---	---	---	---	None		
June		1.0-4.0	>6.0	---	---	---	---	None		
GdA: Glyndon-----	C	April	2.5-6.0	>6.0	---	---	---	---	None	
May		2.5-6.0	>6.0	---	---	---	---	None		
June		2.5-6.0	>6.0	---	---	---	---	None		
July		2.5-6.0	>6.0	---	---	---	---	None		
GfA: Glyndon-----	C	April	2.5-6.0	>6.0	---	---	---	---	None	
May		2.5-6.0	>6.0	---	---	---	---	None		
June		2.5-6.0	>6.0	---	---	---	---	None		
July		2.5-6.0	>6.0	---	---	---	---	None		
April		2.5-6.0	>6.0	---	---	---	---	None		
Gm: Glyndon, SALINE-----	C	May	1.5-3.0	>6.0	---	---	---	---	None	
June		1.5-3.0	>6.0	---	---	---	---	None		
July		1.5-3.0	>6.0	---	---	---	---	None		
April		1.5-3.0	>6.0	---	---	---	---	None		
Gr: Grano-----	D	May	0.0	>6.0	0.0-1.0	---	---	---	None	
June		0.0	>6.0	0.0-1.0	---	---	---	None		
July		0.0	>6.0	0.0-1.0	---	---	---	None		
April		0.0	>6.0	0.0-1.0	---	---	---	None		
May		0.0	>6.0	0.0-1.0	---	---	---	None		
Gs: Grano, SALINE-----	D	June	0.0	>6.0	0.0-1.0	---	---	---	None	
July		0.0	>6.0	0.0-1.0	---	---	---	None		
April		0.0	>6.0	0.0-1.0	---	---	---	None		
May		0.0	>6.0	0.0-1.0	---	---	---	None		
Ha: Hamar-----	B/D	January	0.0-2.0	>6.0	---	---	---	---	None	
February		0.0-2.0	>6.0	---	---	---	---	None		
March		0.0-2.0	>6.0	---	---	---	---	None		
April		0.0-2.0	>6.0	---	---	---	---	None		
May		0.0-2.0	>6.0	---	---	---	---	None		
June		0.0-2.0	>6.0	---	---	---	---	None		
October		0.0-2.0	>6.0	---	---	---	---	None		
November		0.0-2.0	>6.0	---	---	---	---	None		
December		0.0-2.0	>6.0	---	---	---	---	None		
Hb: Hamar-----		B/D	January	0.0-2.0	>6.0	---	---	---	---	None
February			0.0-2.0	>6.0	---	---	---	---	None	
March			0.0-2.0	>6.0	---	---	---	---	None	
April	0.0-2.0		>6.0	---	---	---	---	None		
May	0.0-2.0		>6.0	---	---	---	---	None		
June	0.0-2.0		>6.0	---	---	---	---	None		
October	0.0-2.0		>6.0	---	---	---	---	None		
November	0.0-2.0		>6.0	---	---	---	---	None		
December	0.0-2.0		>6.0	---	---	---	---	None		
HdA: Hecla-----	A		April	3.0-5.0	>6.0	---	---	---	---	None
May			3.0-5.0	>6.0	---	---	---	---	None	
June			3.0-5.0	>6.0	---	---	---	---	None	
HdB:										

WATER FEATURES--Continued
Pembina County, North Dakota

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Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Hecla-----	A	April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
HfA: Hecla-----	A	April	3.0-6.0	>6.0	---	---	---	---	None
May		3.0-6.0	>6.0	---	---	---	---	None	
June		3.0-6.0	>6.0	---	---	---	---	None	
July		3.0-6.0	>6.0	---	---	---	---	None	
August		3.0-6.0	>6.0	---	---	---	---	None	
September		3.0-6.0	>6.0	---	---	---	---	None	
October		3.0-6.0	>6.0	---	---	---	---	None	
HfB: Hecla-----	A	April	3.0-6.0	>6.0	---	---	---	---	None
May		3.0-6.0	>6.0	---	---	---	---	None	
June		3.0-6.0	>6.0	---	---	---	---	None	
July		3.0-6.0	>6.0	---	---	---	---	None	
August		3.0-6.0	>6.0	---	---	---	---	None	
September		3.0-6.0	>6.0	---	---	---	---	None	
October		3.0-6.0	>6.0	---	---	---	---	None	
HgE: Hecla-----	A	April	3.0-5.0	>6.0	---	---	---	---	None
May		3.0-5.0	>6.0	---	---	---	---	None	
June		3.0-5.0	>6.0	---	---	---	---	None	
Maddock-----	A		---	---	---	---	---	---	---
Hh: Hegne, SALINE-----	D	March	0.0-1.5	>6.0	---	---	---	---	None
April		0.0-1.5	>6.0	---	---	---	---	None	
May		0.0-1.5	>6.0	---	---	---	---	None	
June		0.0-1.5	>6.0	---	---	---	---	None	
HmA: Hegne-----	D	March	0.0-1.5	>6.0	---	---	---	---	None
April		0.0-1.5	>6.0	---	---	---	---	None	
May		0.0-1.5	>6.0	---	---	---	---	None	
June		0.0-1.5	>6.0	---	---	---	---	None	
July		0.0-1.5	>6.0	---	---	---	---	None	
Fargo-----	D	March	0.0	>6.0	0.0-0.5	---	---	---	None
		April	0.0	>6.0	0.0-0.5	---	---	---	None
		May	0.0	>6.0	0.0-0.5	---	---	---	None
		June	0.0	>6.0	0.0-0.5	---	---	---	None
		July	0.0	>6.0	0.0-0.5	---	---	---	None
HmB: Hegne-----	D	March	0.0-1.5	>6.0	---	---	---	---	None
April		0.0-1.5	>6.0	---	---	---	---	None	
May		0.0-1.5	>6.0	---	---	---	---	None	
June		0.0-1.5	>6.0	---	---	---	---	None	
July		0.0-1.5	>6.0	---	---	---	---	None	
Fargo-----	D	March	0.0	>6.0	0.0-0.5	---	---	---	None
		April	0.0	>6.0	0.0-0.5	---	---	---	None
		May	0.0	>6.0	0.0-0.5	---	---	---	None
		June	0.0	>6.0	0.0-0.5	---	---	---	None
		July	0.0	>6.0	0.0-0.5	---	---	---	None
La:									

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding		
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency	
			Ft	Ft	Ft					
Lamoure-----	B/D	January	0.0-1.5	>6.0	---	---	---	---	None	
		February	0.0-1.5	>6.0	---	---	---	---	None	
		March	0.0-1.5	>6.0	---	---	---	Brief	Occasional	
		April	0.0-1.5	>6.0	---	---	---	Brief	Occasional	
		May	0.0-1.5	>6.0	---	---	---	Brief	Occasional	
		June	0.0-1.5	>6.0	---	---	---	Brief	Occasional	
		July	---	---	---	---	---	Brief	Occasional	
		August	---	---	---	---	---	Brief	Occasional	
		September	---	---	---	---	---	Brief	Occasional	
		October	0.0-1.5	>6.0	---	---	---	Brief	Occasional	
		November	0.0-1.5	>6.0	---	---	---	---	None	
		December	0.0-1.5	>6.0	---	---	---	---	None	
LbA: Lankin-----	B	January	3.0-5.0	>6.0	---	---	---	---	None	
February		3.0-5.0	>6.0	---	---	---	---	None		
March		3.0-5.0	>6.0	---	---	---	---	None		
April		3.0-5.0	>6.0	---	---	---	---	None		
May		3.0-5.0	>6.0	---	---	---	---	None		
June		3.0-5.0	>6.0	---	---	---	---	None		
September		3.0-5.0	>6.0	---	---	---	---	None		
October		3.0-5.0	>6.0	---	---	---	---	None		
November		3.0-5.0	>6.0	---	---	---	---	None		
December		3.0-5.0	>6.0	---	---	---	---	None		
LgA: Gilby-----		C	April	1.0-4.0	>6.0	---	---	---	---	None
May			1.0-4.0	>6.0	---	---	---	---	None	
June	1.0-4.0		>6.0	---	---	---	---	None		
Lankin-----	B	January	3.0-5.0	>6.0	---	---	---	---	None	
February		3.0-5.0	>6.0	---	---	---	---	None		
March		3.0-5.0	>6.0	---	---	---	---	None		
April		3.0-5.0	>6.0	---	---	---	---	None		
May		3.0-5.0	>6.0	---	---	---	---	None		
June		3.0-5.0	>6.0	---	---	---	---	None		
September		3.0-5.0	>6.0	---	---	---	---	None		
October		3.0-5.0	>6.0	---	---	---	---	None		
November		3.0-5.0	>6.0	---	---	---	---	None		
December		3.0-5.0	>6.0	---	---	---	---	None		
LpA: La Prairie-----		B	March	3.5-5.0	>6.0	---	---	---	Brief	Occasional
April			3.5-5.0	>6.0	---	---	---	Brief	Occasional	
May	3.5-5.0		>6.0	---	---	---	Brief	Occasional		
June	3.5-5.0		>6.0	---	---	---	Brief	Occasional		
LrA: La Prairie-----	B	March	3.5-5.0	>6.0	---	---	---	Brief	Occasional	
April		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
May		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
June		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
LrB: La Prairie-----	B	March	3.5-5.0	>6.0	---	---	---	Brief	Occasional	
April		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
May		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
June		3.5-5.0	>6.0	---	---	---	Brief	Occasional		
LvD: La Prairie-----	B	March	3.5-5.0	>6.0	---	---	---	Brief	Frequent	
April		3.5-5.0	>6.0	---	---	---	Brief	Frequent		
May		3.5-5.0	>6.0	---	---	---	Brief	Frequent		
June		3.5-5.0	>6.0	---	---	---	Brief	Frequent		
Fairdale-----	B	March	---	---	---	---	---	Brief	Frequent	
April		3.0-5.0	>6.0	---	---	---	Brief	Frequent		
May		3.0-5.0	>6.0	---	---	---	Brief	Frequent		
June		3.0-5.0	>6.0	---	---	---	Brief	Frequent		

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
M-W: Miscellaneous Water-----	---	January	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		February	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		March	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		April	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		May	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		June	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		July	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		August	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		September	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		October	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		November	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
		December	0.0	0.0	0.0-6.0	Very long	Frequent	---	None
MaA: Maddock-----	A		---	---	---	---	---	---	---
MaB: Maddock-----	A		---	---	---	---	---	---	---
MbA: Maddock-----	A		---	---	---	---	---	---	---
MbB: Maddock-----	A		---	---	---	---	---	---	---
McB: Maddock, VARIANT-----	A	April	1.5-3.5	>6.0	---	---	---	---	None
		May	1.5-3.5	>6.0	---	---	---	---	None
		June	1.5-3.5	>6.0	---	---	---	---	None
Mf: Mcdonaldsville-----	D	April	0.0-3.0	>6.0	---	---	---	---	None
		May	0.0-3.0	>6.0	---	---	---	---	None
		June	0.0-3.0	>6.0	---	---	---	---	None
Na: Nahon-----	D	April	3.5-5.0	>6.0	---	---	---	---	None
		May	3.5-5.0	>6.0	---	---	---	---	None
		June	3.5-5.0	>6.0	---	---	---	---	None
Ng: Neché-----	C	April	3.0-6.0	>6.0	---	---	---	Brief	Occasional
		May	3.0-6.0	>6.0	---	---	---	Brief	Occasional
		June	3.0-6.0	>6.0	---	---	---	---	None
Nh: Neché-----	C	April	3.0-6.0	>6.0	---	---	---	Brief	Occasional
		May	3.0-6.0	>6.0	---	---	---	Brief	Occasional
		June	3.0-6.0	>6.0	---	---	---	---	None
Oa: Ojata-----	C	January	0.0-1.0	>6.0	---	---	---	---	None
		February	0.0-1.0	>6.0	---	---	---	---	None
		March	0.0-1.0	>6.0	---	---	---	---	None
		April	0.0-1.0	>6.0	---	---	---	---	None
		May	0.0-1.0	>6.0	---	---	---	---	None
		June	0.0-1.0	>6.0	---	---	---	---	None
		September	0.0-1.0	>6.0	---	---	---	---	None
		October	0.0-1.0	>6.0	---	---	---	---	None
		November	0.0-1.0	>6.0	---	---	---	---	None
		December	0.0-1.0	>6.0	---	---	---	---	None
OgB: Olga-----	C		---	---	---	---	---	---	---
OgE: Olga-----	C		---	---	---	---	---	---	---
OvA:			---	---	---	---	---	---	---

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Overly-----	C	April	3.0-5.0	>6.0	---	---	---	---	None
		May	3.0-5.0	>6.0	---	---	---	---	None
		June	3.0-5.0	>6.0	---	---	---	---	None
Pa: Peat-----	A/D	January	0.0	>6.0	0.0-1.0	Very long	---	---	None
		February	0.0	>6.0	0.0-1.0	Very long	---	---	None
		March	0.0	>6.0	0.0-1.0	Very long	---	---	None
		April	0.0	>6.0	0.0-1.0	Very long	---	---	None
		May	0.0	>6.0	0.0-1.0	Very long	---	---	None
		June	0.0	>6.0	0.0-1.0	Very long	---	---	None
		November	0.0	>6.0	0.0-1.0	Very long	---	---	None
		December	0.0	>6.0	0.0-1.0	Very long	---	---	None
Pg: Pits-----	A		---	---	---	---	---	---	---
Pu: Perella-----	C/D	April	0.0	>6.0	0.0-1.0	---	---	---	None
		May	0.0	>6.0	0.0-1.0	---	---	---	None
		June	0.0	>6.0	0.0-1.0	---	---	---	None
		July	0.0	>6.0	0.0-1.0	---	---	---	None
PyA: Poppleton-----	A	January	2.5-5.0	>6.0	---	---	---	---	None
		February	2.5-5.0	>6.0	---	---	---	---	None
		March	2.5-5.0	>6.0	---	---	---	---	None
		April	2.5-5.0	>6.0	---	---	---	---	None
		May	2.5-5.0	>6.0	---	---	---	---	None
		June	2.5-5.0	>6.0	---	---	---	---	None
		November	2.5-5.0	>6.0	---	---	---	---	None
		December	2.5-5.0	>6.0	---	---	---	---	None
Ra: Rauville-----	D	January	0.0-0.5	>6.0	---	---	---	---	None
		February	0.0-0.5	>6.0	---	---	---	---	None
		March	0.0-0.5	>6.0	---	---	---	Long	Frequent
		April	0.0-0.5	>6.0	---	---	---	Long	Frequent
		May	0.0-0.5	>6.0	---	---	---	Long	Frequent
		June	0.0-0.5	>6.0	---	---	---	Long	Frequent
		July	0.0-0.5	>6.0	---	---	---	Long	Frequent
		August	0.0-0.5	>6.0	---	---	---	Long	Frequent
		September	0.0-0.5	>6.0	---	---	---	Long	Frequent
		October	0.0-0.5	>6.0	---	---	---	Long	Frequent
		November	0.0-0.5	>6.0	---	---	---	---	None
		December	0.0-0.5	>6.0	---	---	---	---	None
RbA: Renshaw-----	B		---	---	---	---	---	---	---
RfB: Renshaw-----	B		---	---	---	---	---	---	---
RoA: Rolette-----	C		---	---	---	---	---	---	---
Rp: Rough Broken Land-----	C		---	---	---	---	---	---	---
Rr: Ryan-----	D	March	0.0	>6.0	0.0-0.5	---	---	Long	Occasional
		April	0.0	>6.0	0.0-0.5	---	---	Long	Occasional
		May	0.0	>6.0	0.0-0.5	---	---	Long	Occasional
		June	0.0	>6.0	0.0-0.5	---	---	Long	Occasional
		July	0.0	>6.0	0.0-0.5	---	---	---	None

WATER FEATURES--Continued
Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Fargo-----	D	March	0.0	>6.0	0.0-0.5	---	---	---	None
		April	0.0	>6.0	0.0-0.5	---	---	---	None
		May	0.0	>6.0	0.0-0.5	---	---	---	None
		June	0.0	>6.0	0.0-0.5	---	---	---	None
		July	0.0	>6.0	0.0-0.5	---	---	---	None
SnD: Serden-----	A		---	---	---	---	---	---	---
SwA: Swenoda-----	B	April	3.0-5.0	2.5-4.0	---	---	---	---	None
		May	3.0-5.0	2.5-4.0	---	---	---	---	None
		June	3.0-5.0	2.5-4.0	---	---	---	---	None
Tf: Tiffany-----	B/D	April	0.0	>6.0	0.0-1.0	---	---	---	None
		May	0.0	>6.0	0.0-1.0	---	---	---	None
		June	0.0	>6.0	0.0-1.0	---	---	---	None
VaA: Vang-----	B		---	---	---	---	---	---	---
VbA: Vang-----	B		---	---	---	---	---	---	---
VwA: Vang-----	B		---	---	---	---	---	---	---
Walsh-----	B	March	4.0-6.0	>6.0	---	---	---	---	None
		April	4.0-6.0	>6.0	---	---	---	---	None
		May	4.0-6.0	>6.0	---	---	---	---	None
		June	4.0-6.0	>6.0	---	---	---	---	None
VwB: Vang-----	B		---	---	---	---	---	---	---
Walsh-----	B	March	4.0-6.0	>6.0	---	---	---	---	None
		April	4.0-6.0	>6.0	---	---	---	---	None
		May	4.0-6.0	>6.0	---	---	---	---	None
		June	4.0-6.0	>6.0	---	---	---	---	None
Vy: Vang, VARIANT-----	B/D	April	0.0-3.0	>6.0	---	---	---	---	None
		May	0.0-3.0	>6.0	---	---	---	---	None
		June	0.0-3.0	>6.0	---	---	---	---	None
W: Water-----	D		---	---	---	---	---	---	---
WaA: Wahpeton-----	D	March	---	---	---	---	---	Brief	Occasional
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
WaB: Wahpeton-----	D	March	---	---	---	---	---	Brief	Occasional
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
WaC: Wahpeton-----	D	March	---	---	---	---	---	Brief	Occasional
		April	---	---	---	---	---	Brief	Occasional
		May	---	---	---	---	---	Brief	Occasional
		June	---	---	---	---	---	Brief	Occasional
WhC:			---	---	---	---	---	---	---

WATER FEATURES--Continued
 Pembina County, North Dakota

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Walsh-----	C	March	4.0-6.0	>6.0	---	---	---	---	None
		April	4.0-6.0	>6.0	---	---	---	---	None
		May	4.0-6.0	>6.0	---	---	---	---	None
		June	4.0-6.0	>6.0	---	---	---	---	None
WhD: Walsh-----	C	March	4.0-6.0	>6.0	---	---	---	---	None
April		4.0-6.0	>6.0	---	---	---	---	None	
May		4.0-6.0	>6.0	---	---	---	---	None	
June		4.0-6.0	>6.0	---	---	---	---	None	
WnA: Walsh-----	C	March	4.0-6.0	>6.0	---	---	---	---	None
April		4.0-6.0	>6.0	---	---	---	---	None	
May		4.0-6.0	>6.0	---	---	---	---	None	
June		4.0-6.0	>6.0	---	---	---	---	None	
WoA: Waukon-----	B	March	4.0-6.0	>6.0	---	---	---	---	None
April		4.0-6.0	>6.0	---	---	---	---	None	
May		4.0-6.0	>6.0	---	---	---	---	None	
June		4.0-6.0	>6.0	---	---	---	---	None	
WoB: Waukon-----	B	March	---	---	---	---	---	---	---
April		---	---	---	---	---	---	---	
May		---	---	---	---	---	---	---	
June		---	---	---	---	---	---	---	
WoC: Waukon-----	B	March	---	---	---	---	---	---	---
April		---	---	---	---	---	---	---	
May		---	---	---	---	---	---	---	
June		---	---	---	---	---	---	---	
WoD: Waukon-----	B	March	---	---	---	---	---	---	---
April		---	---	---	---	---	---	---	
May		---	---	---	---	---	---	---	
June		---	---	---	---	---	---	---	
Wv: Wheatville-----	C	April	2.5-6.0	>6.0	---	---	---	---	None
May		2.5-6.0	>6.0	---	---	---	---	None	
June		2.5-6.0	>6.0	---	---	---	---	None	
July		2.5-6.0	>6.0	---	---	---	---	None	
ZgC: Zell-----	B	March	---	---	---	---	---	---	---
April		---	---	---	---	---	---	---	
May		---	---	---	---	---	---	---	
June		---	---	---	---	---	---	---	
Gardena-----	B	April	3.0-5.0	>6.0	---	---	---	---	None
May		3.0-5.0	>6.0	---	---	---	---	None	
June		3.0-5.0	>6.0	---	---	---	---	None	
July		---	---	---	---	---	---	---	
ZgD: Zell-----	B	March	---	---	---	---	---	---	---
April		---	---	---	---	---	---	---	
May		---	---	---	---	---	---	---	
June		---	---	---	---	---	---	---	
Gardena-----	B	April	3.0-5.0	>6.0	---	---	---	---	None
May		3.0-5.0	>6.0	---	---	---	---	None	
June		3.0-5.0	>6.0	---	---	---	---	None	
July		---	---	---	---	---	---	---	

